Policy Myths and Options

EES 3310/5310
Global Climate Change
Jonathan Gilligan
Class #23: Friday, February 28 2020

Announcement

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- Monday, March 10:
  - Lab will meet in Stevenson 6740 (7th floor, EES Department) instead of our regular room.
  - We will play a board game simulating converting New York City to renewable energy.
  - I will post the rules for the game on Brightspace.
    - Please read them before lab on Monday.

Pielke's Lessons from The Ozone Hole

Pielke's Lessons from the Ozone Hole
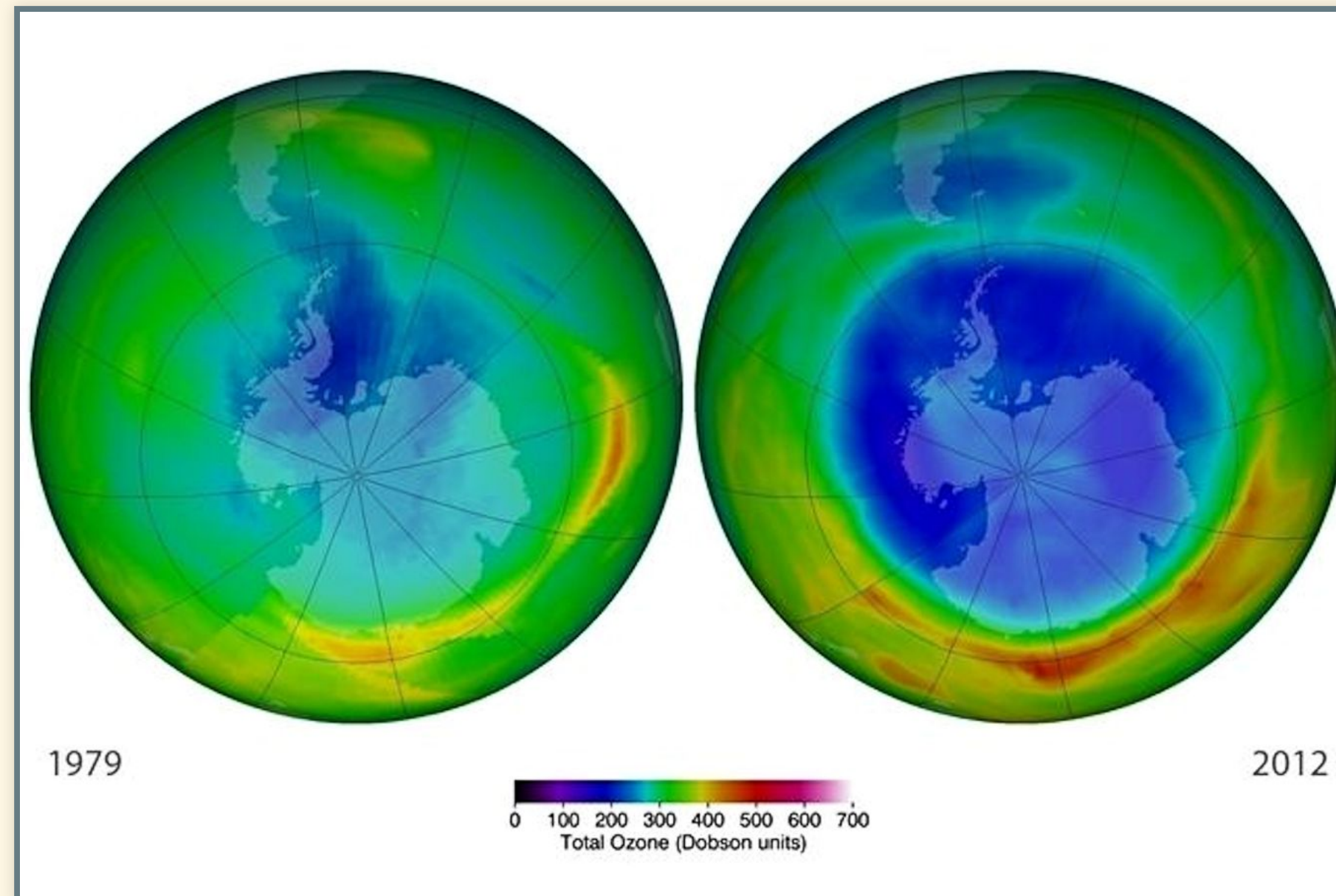
- 1970s: Significant scientific uncertainty
- Decision to take action without waiting for certainty
- Discovery of hole: tipping point
- "No regrets"" policy
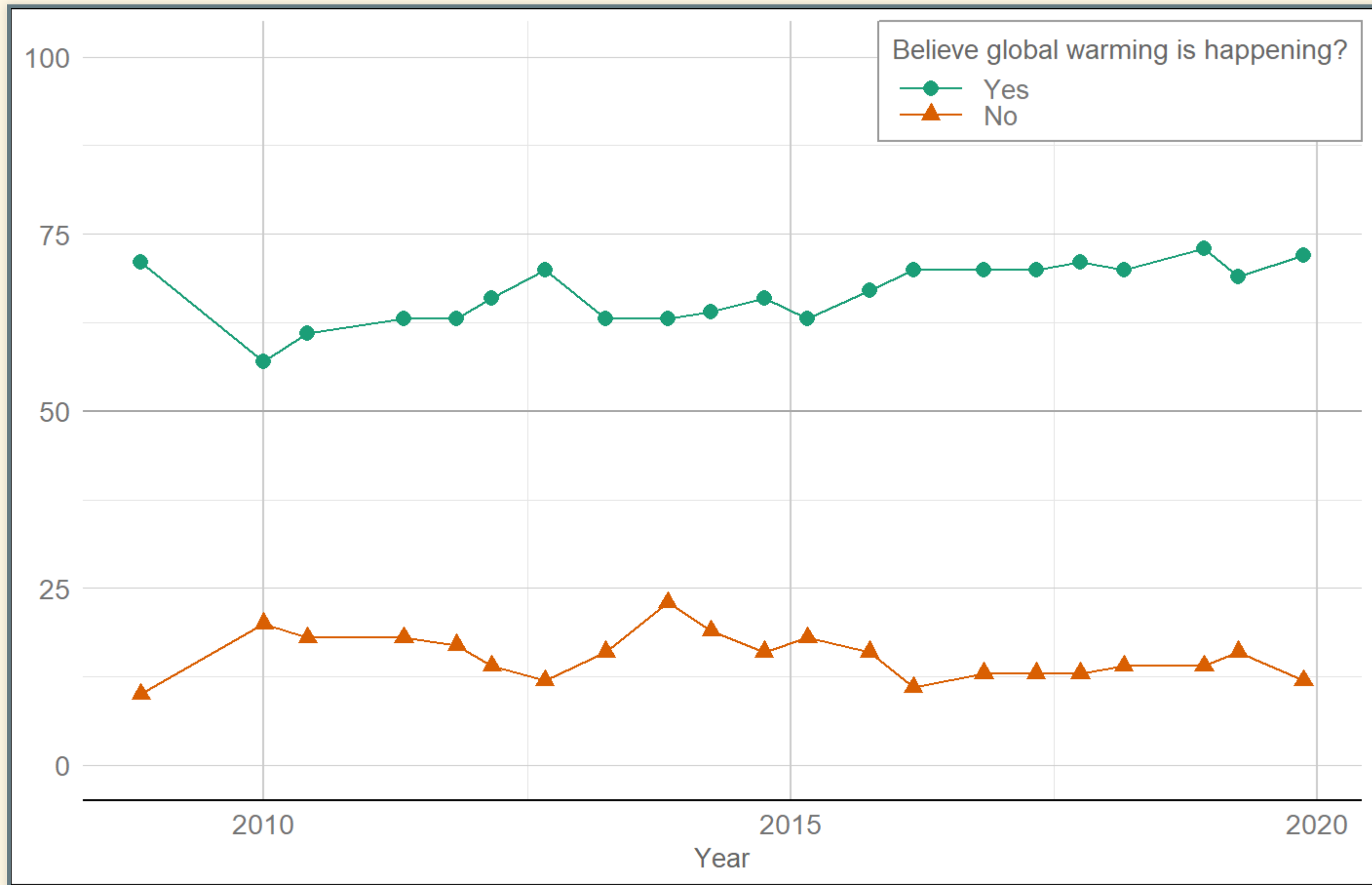- Flexible policy (renegotiate details every two years)
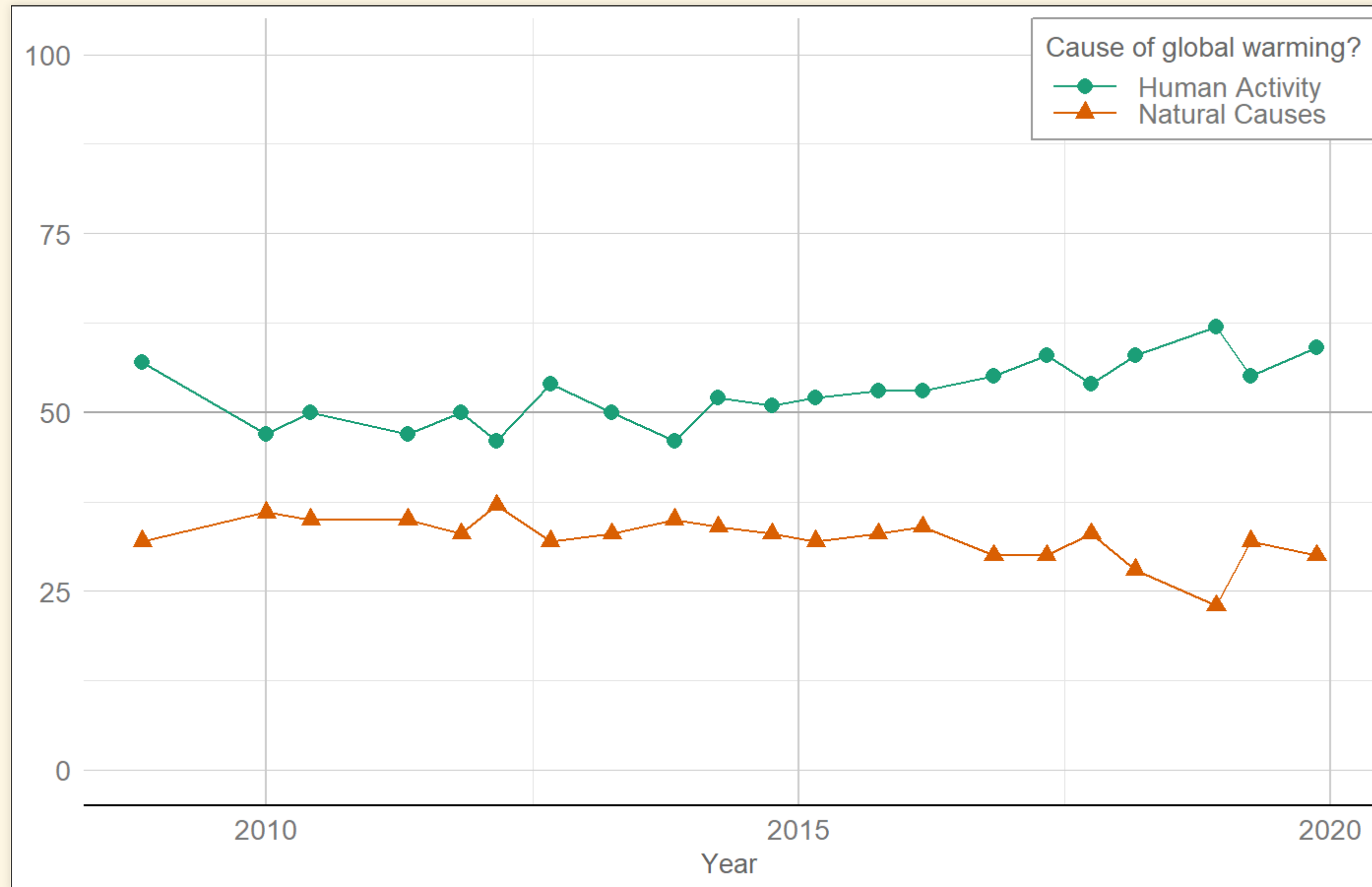
Policy Myths

Policy Myths

1. We lack political will
2. We must trade off the economy for the environment
3. We have all the technology we need
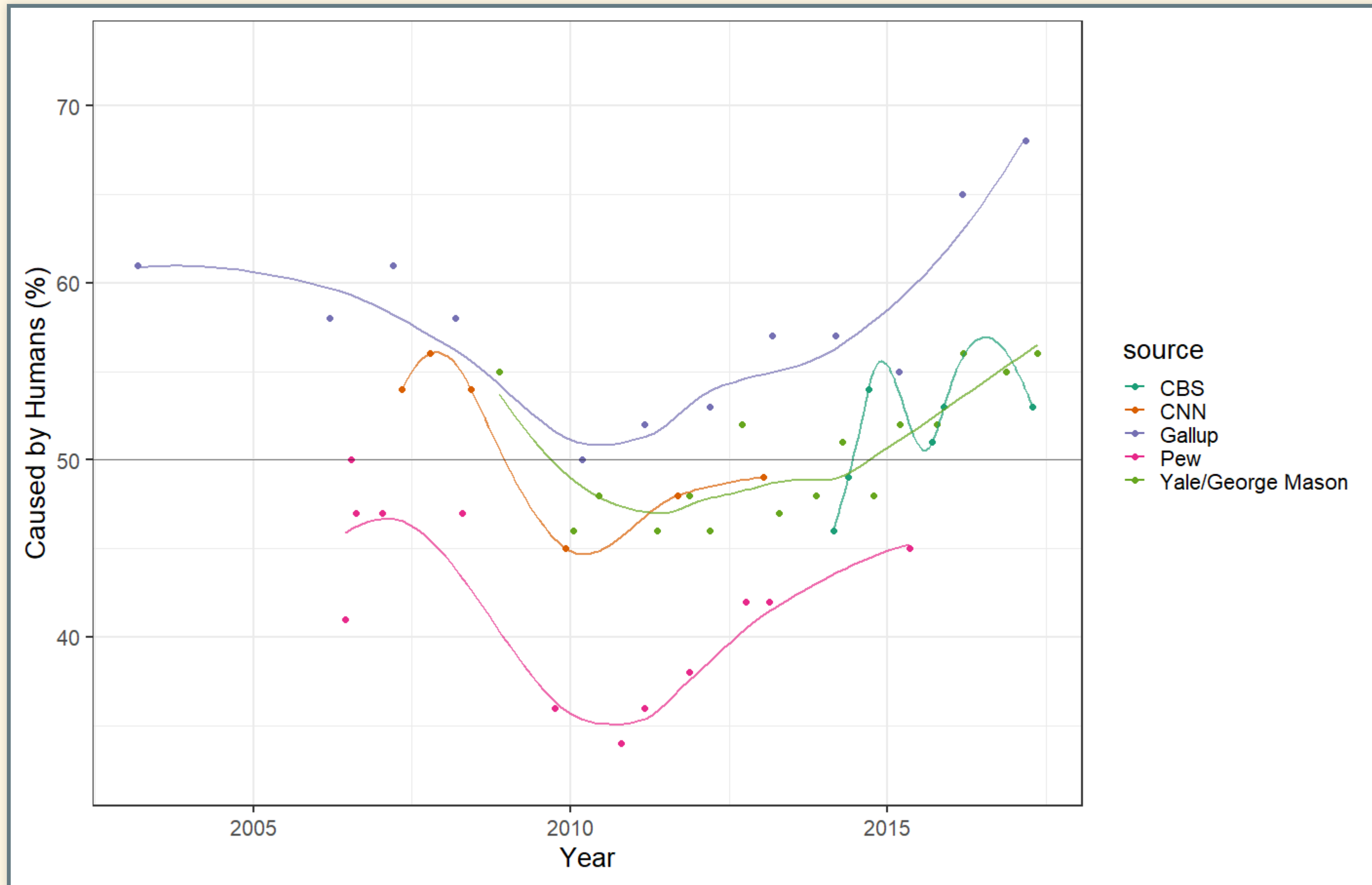
Myth 1: We Lack Political Will

Public Opinion: Is the Earth Warming
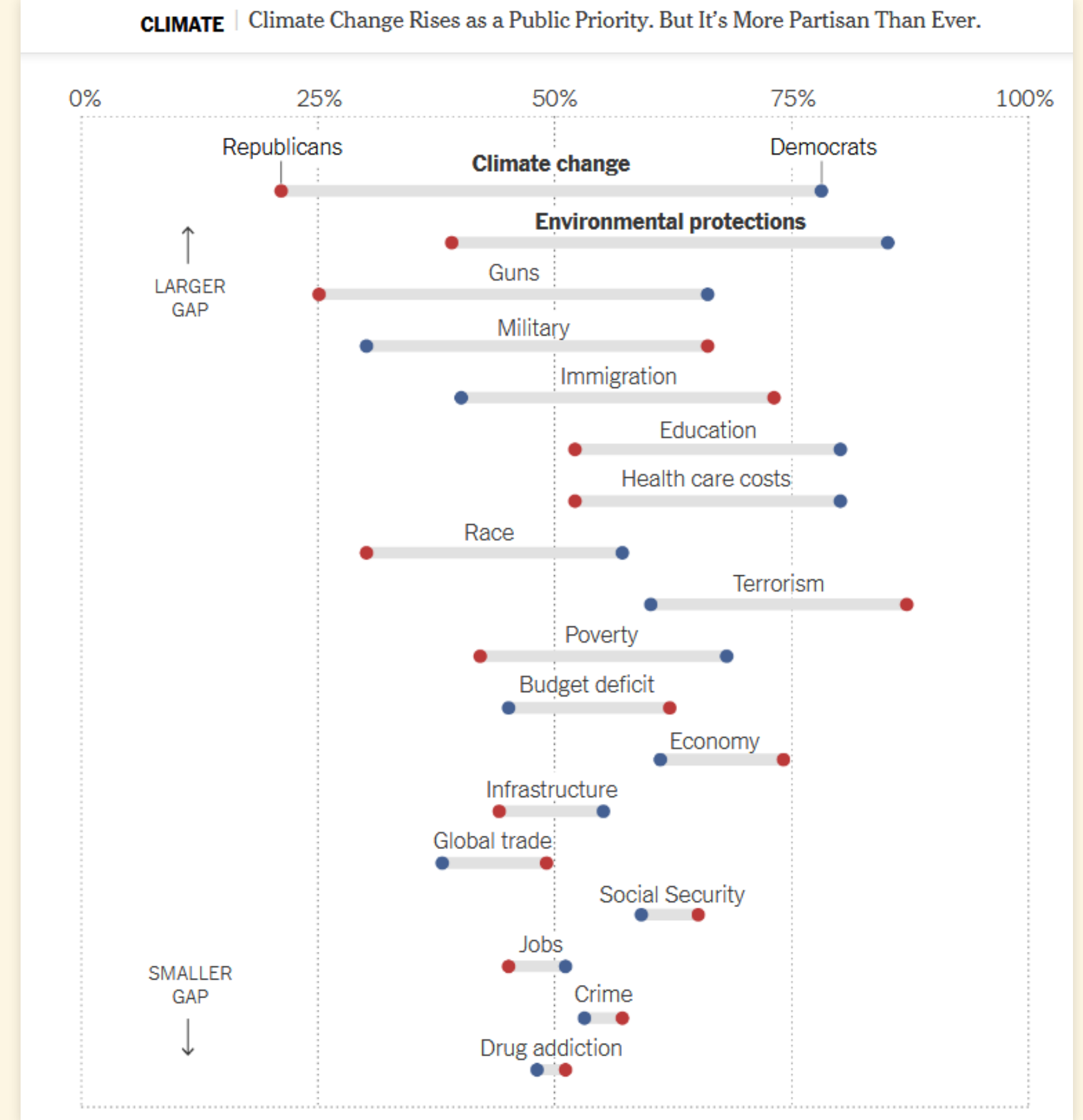
Public Opinion: Cause of Warming?

Variation across polls

Partisan Split

Partisan Split:

- Climate policy is the most divisive issue
- Greater partisan polarization than abortion

CLIMATE | Climate Change Rises as a Public Priority. But It's More Partisan Than Ever.

Pew: As Economic Concerns Recede, Environmental Protection Rises on the Public's Policy Agenda

Partisan split
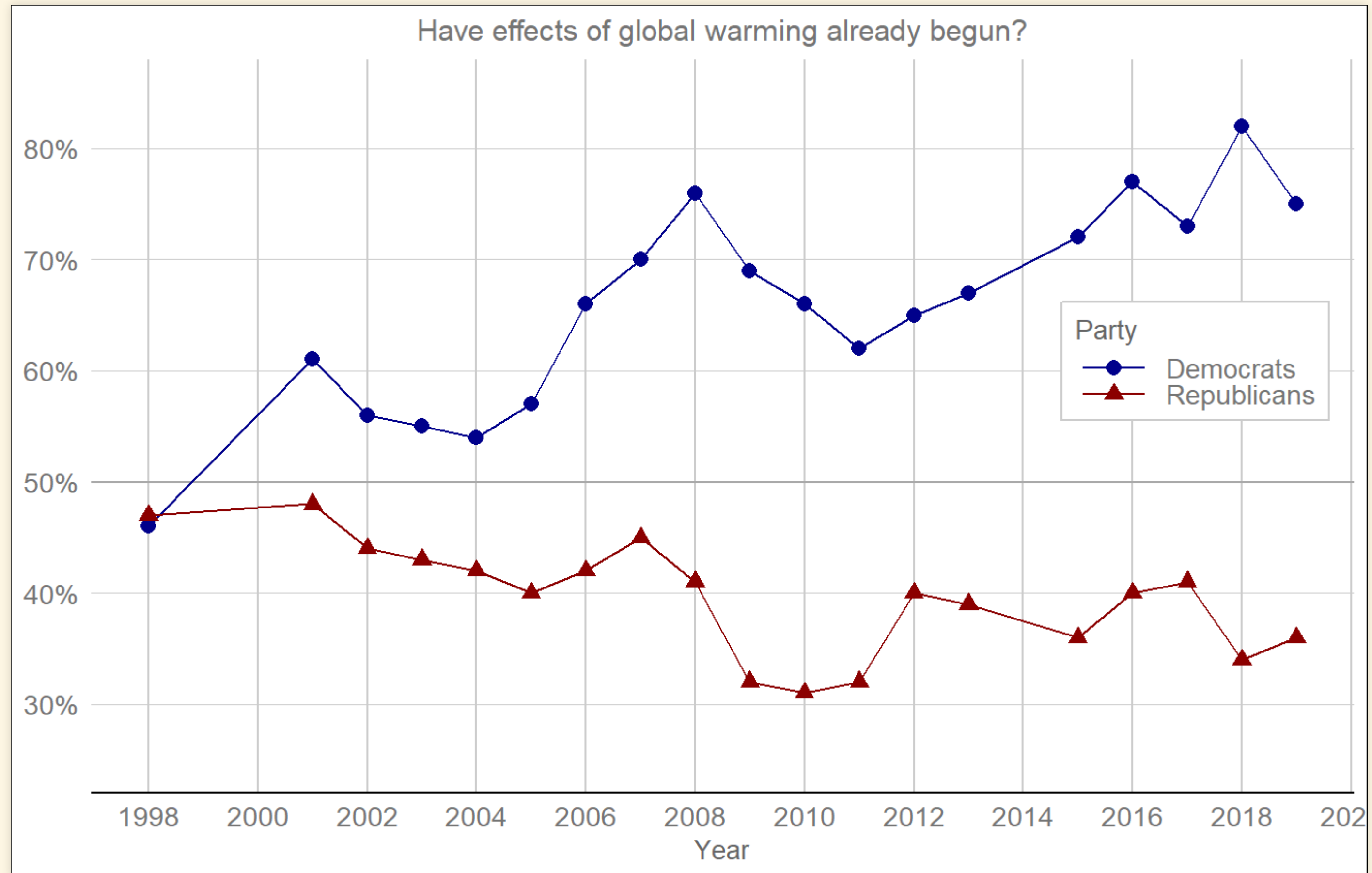
Have effects of global warming already begun?

Party
● Democrats
▲ Republicans

Polarization in Congress 1970–2015

League of Conservation Voters scores, by party and chamber

Myth 2:
We must trade off the economy for the environment
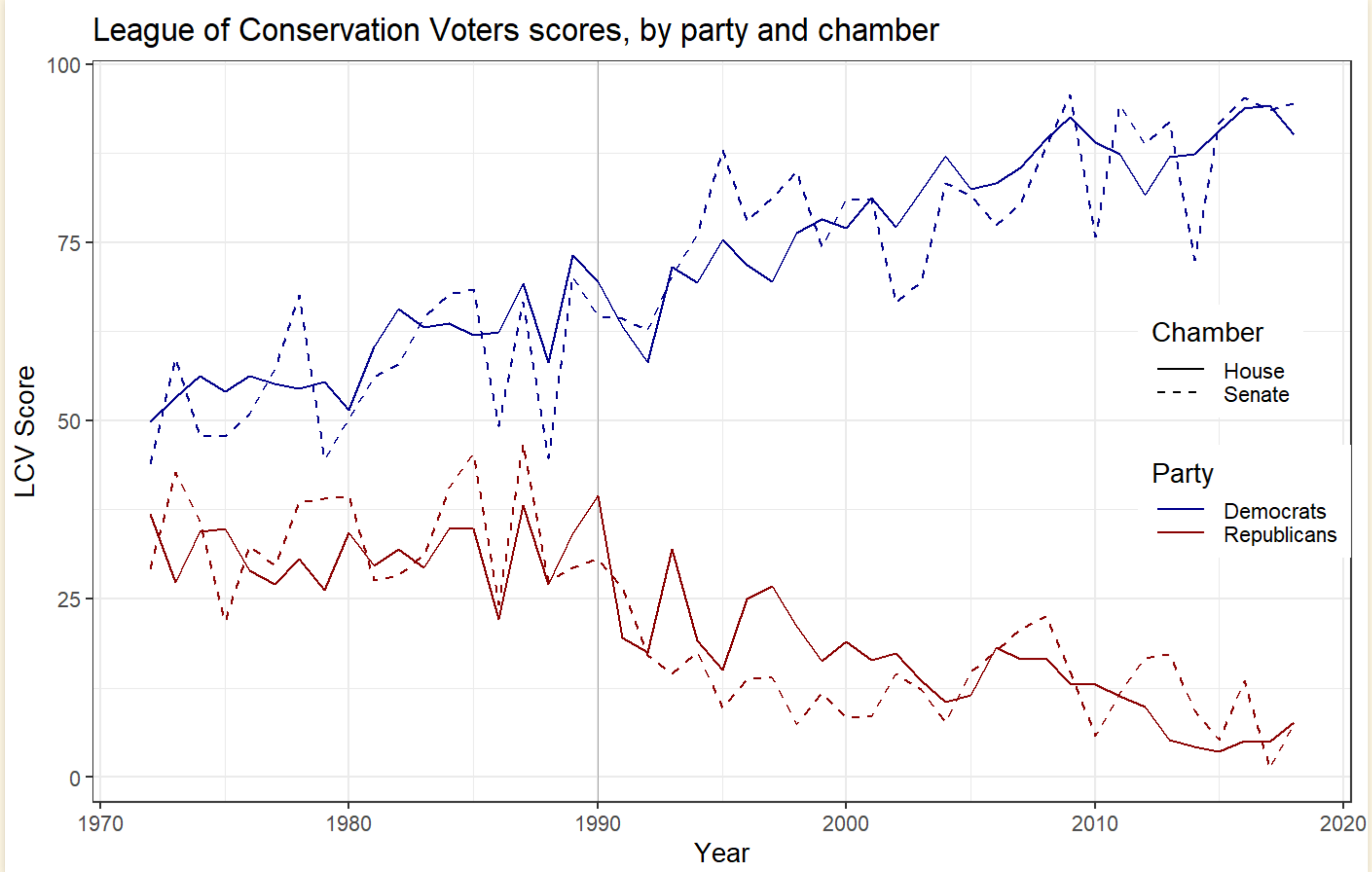
Willingness to pay (2009)

Would you support a policy if
the average cost per household is...?

Unconditional	61.8%
$80/year	52.1%
$175/year	28.7%
$770/year	6.7%

0%   50%   100%

Cost
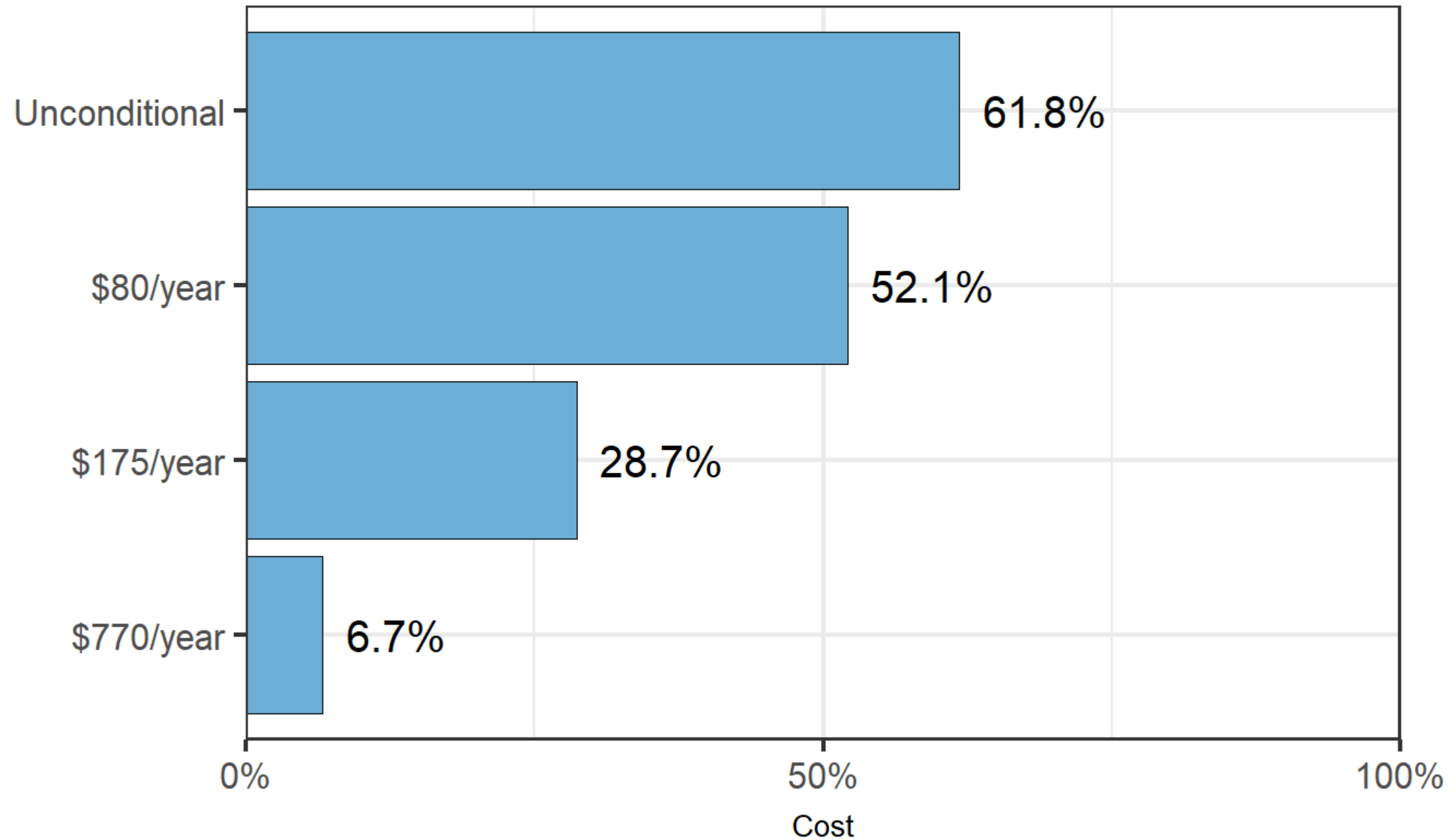
Iron Law of Climate Policy

- People want action on global warming
- But **if climate policies conflict with economic growth, growth will win every time.**

Frank Luntz (2010)

What has changed is that the American economy went to hell. And when you ask voters are they more concerned about destroying their environment over the next 100 years or rehabilitating their economy over the next 100 weeks, they'll choose the economy over the environment any day.

"Candidates Take Aim At Climate Bill To Win Votes" *All Things Considered*, NPR, 28 Oct. 2010

https://www.npr.org/templates/story/story.php?storyId=130888515

James Inhofe (2016)

I assumed like everybody else, way back when everyone was talking about global warming and all that, I assumed that that was probably right, until I found out what it was going to cost

Heritage Foundation Energy & Climate Policy Summit, Dec. 8, 2016

https://www.youtube.com/watch?v=surP84BQwhc

New Data

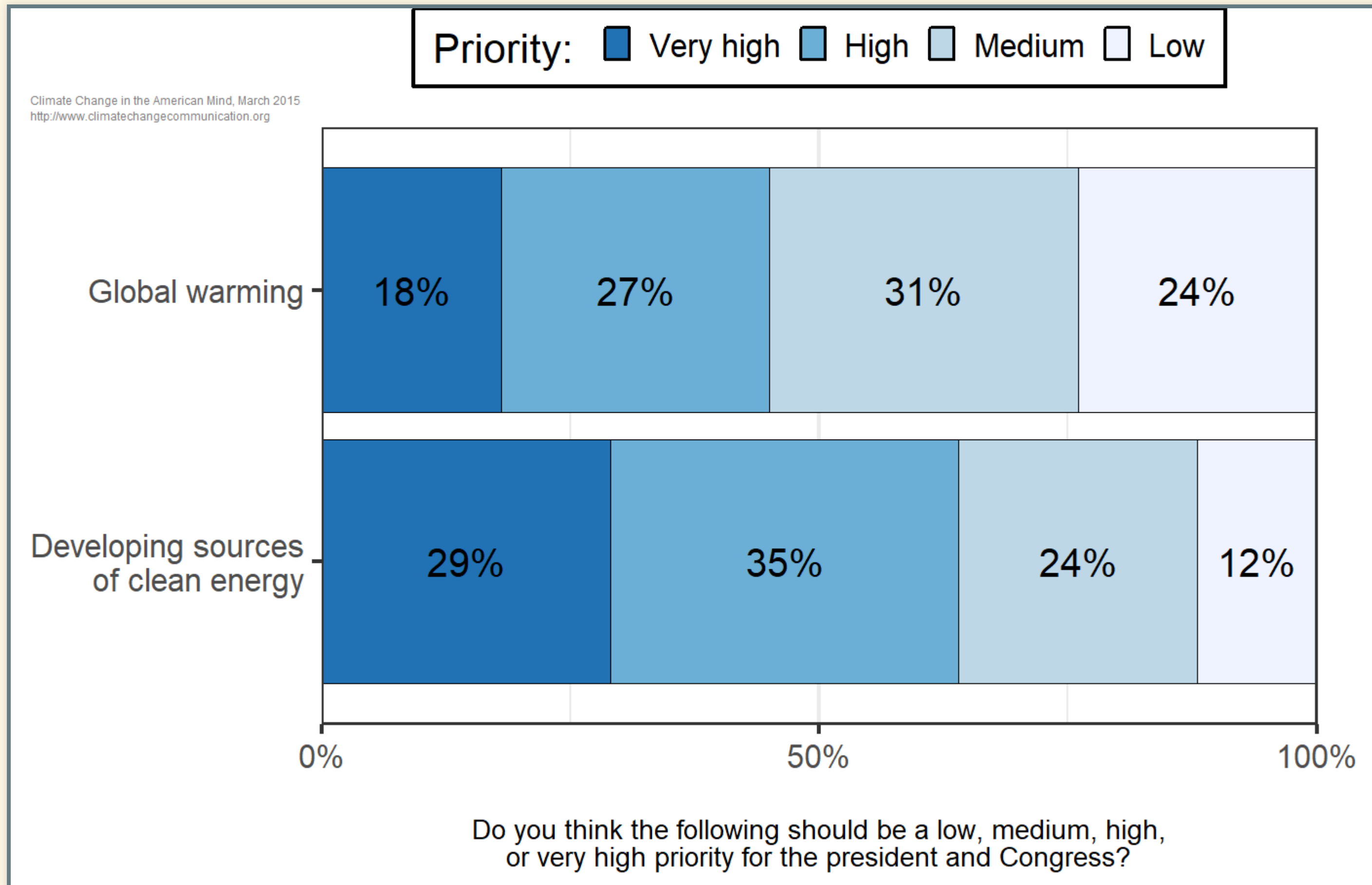*Nearly two-thirds of Americans ranked protecting the environment as a leading policy priority. — Pew survey (2020)*

By the widest margin since 2000, more Americans believe environmental protection should take precedence over economic growth.
— Gallup Survey (2019)
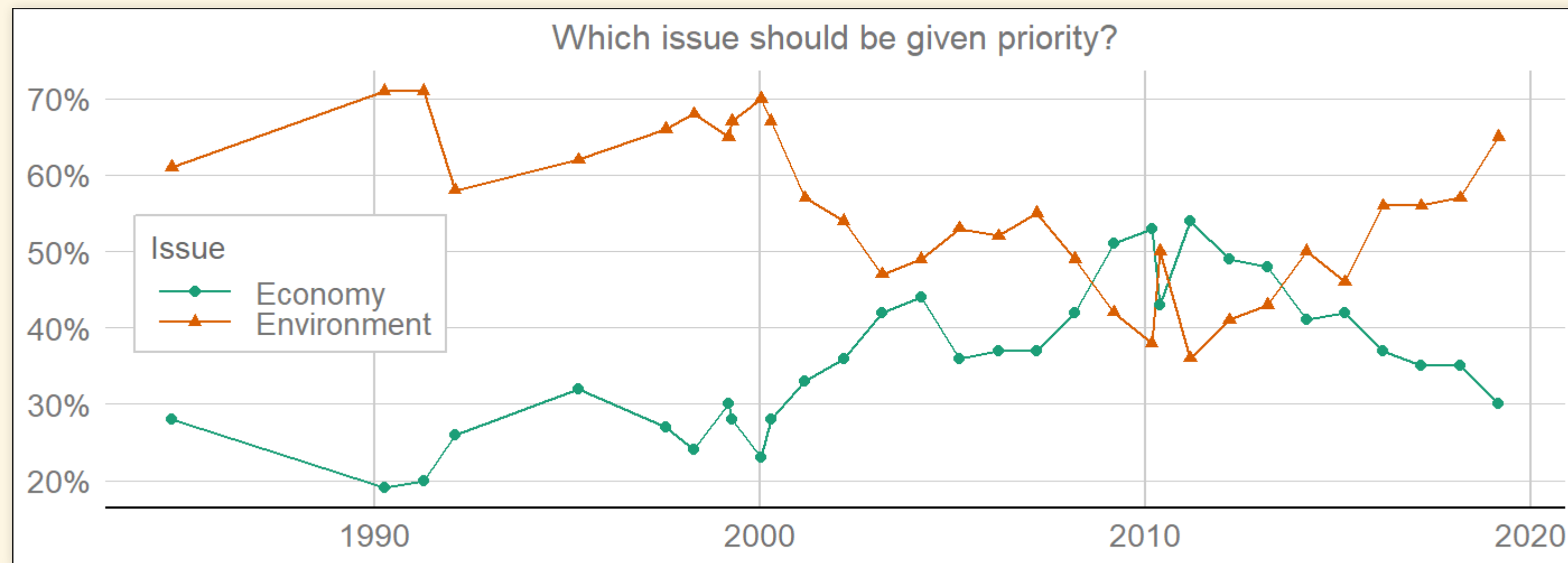
Which issue should be given priority?

Issue
— Economy
— Environment

Public Opinion on Priorities (2015)

Priority: ☐ Very high ☐ High ☐ Medium ☐ Low

Climate Change in the American Mind, March 2015
http://www.climatechangecommunication.org

Global warming
18% | 27% | 31% | 24%

Developing sources of clean energy
29% | 35% | 24% | 12%

0% 50% 100%

Do you think the following should be a low, medium, high,
or very high priority for the president and Congress?

Public Support for Policies (2017)

Climate Change in the American Mind, March 2017
http://www.climatechangecommunication.org

Support: Strongly support | Somewhat support | No answer | Somewhat oppose | Strongly oppose

Policy	Strongly support	Somewhat support	No answer	Somewhat oppose	Strongly oppose
Regulate carbon dioxide (the primary greenhouse gas) as a pollutant	59%	33%	1%	6%	1%
Fund more research into renewable energy sources, such as solar and wind power	51%	36%	1%	7%	5%
Provide tax rebates for people who purchase energy-efficient vehicles or solar panels	39%	43%	1%	9%	8%
Require electric utilities to produce at least 20% of their electricity from ... renewable energy sources even if it costs the average household an extra $100 a year.	29%	37%	1%	17%	16%

How much to you support or oppose the following policies?

Political Will

Political Will

- Walter Lippmann (Pielke's paraphrase):

  The goal of politics is not to get everyone to think alike, but to get people who think differently to act alike
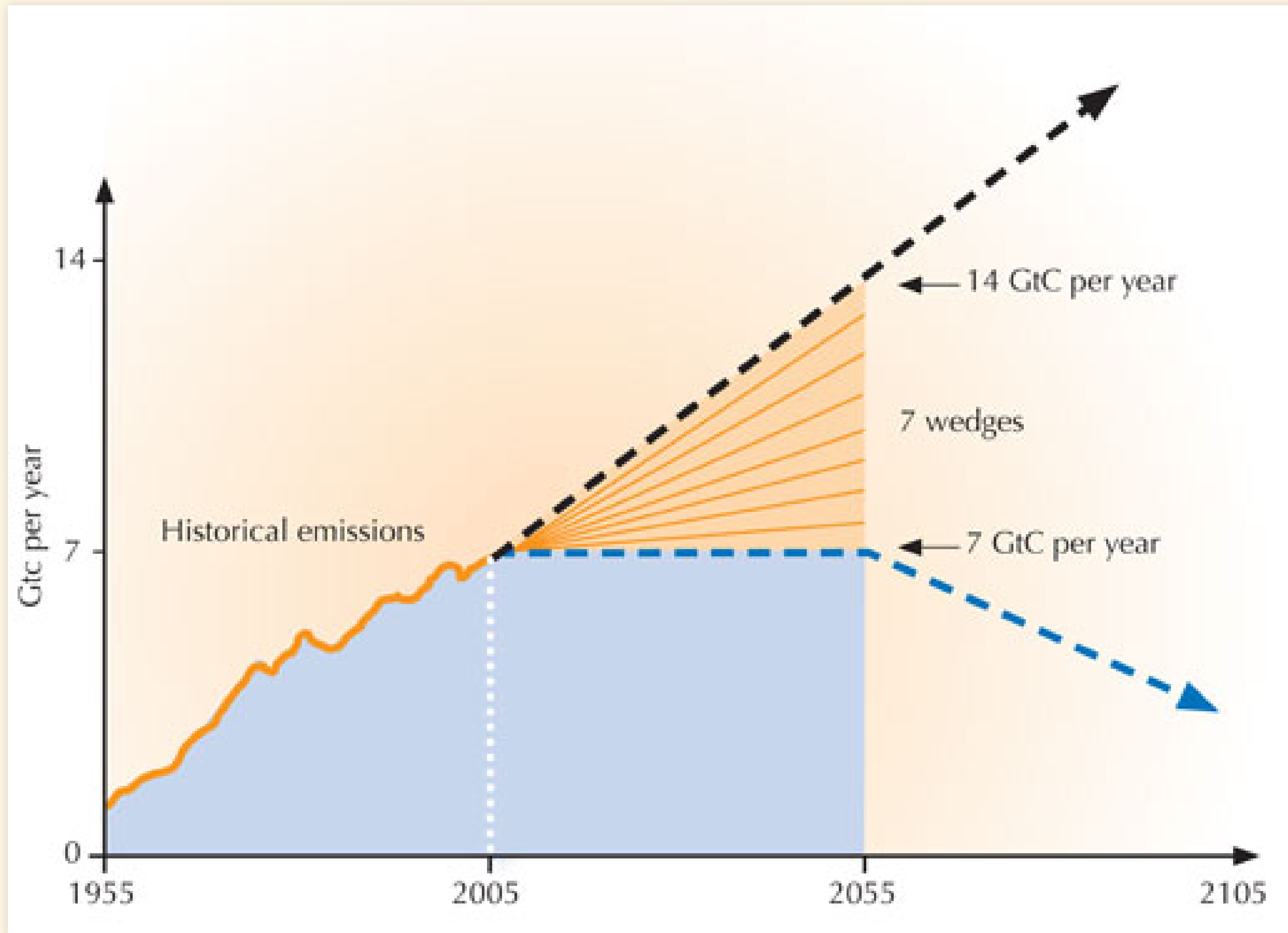
- Cass Sunstein

  people can often agree on constitutional practices, and even on constitutional rights, when they cannot agree on constitutional theories
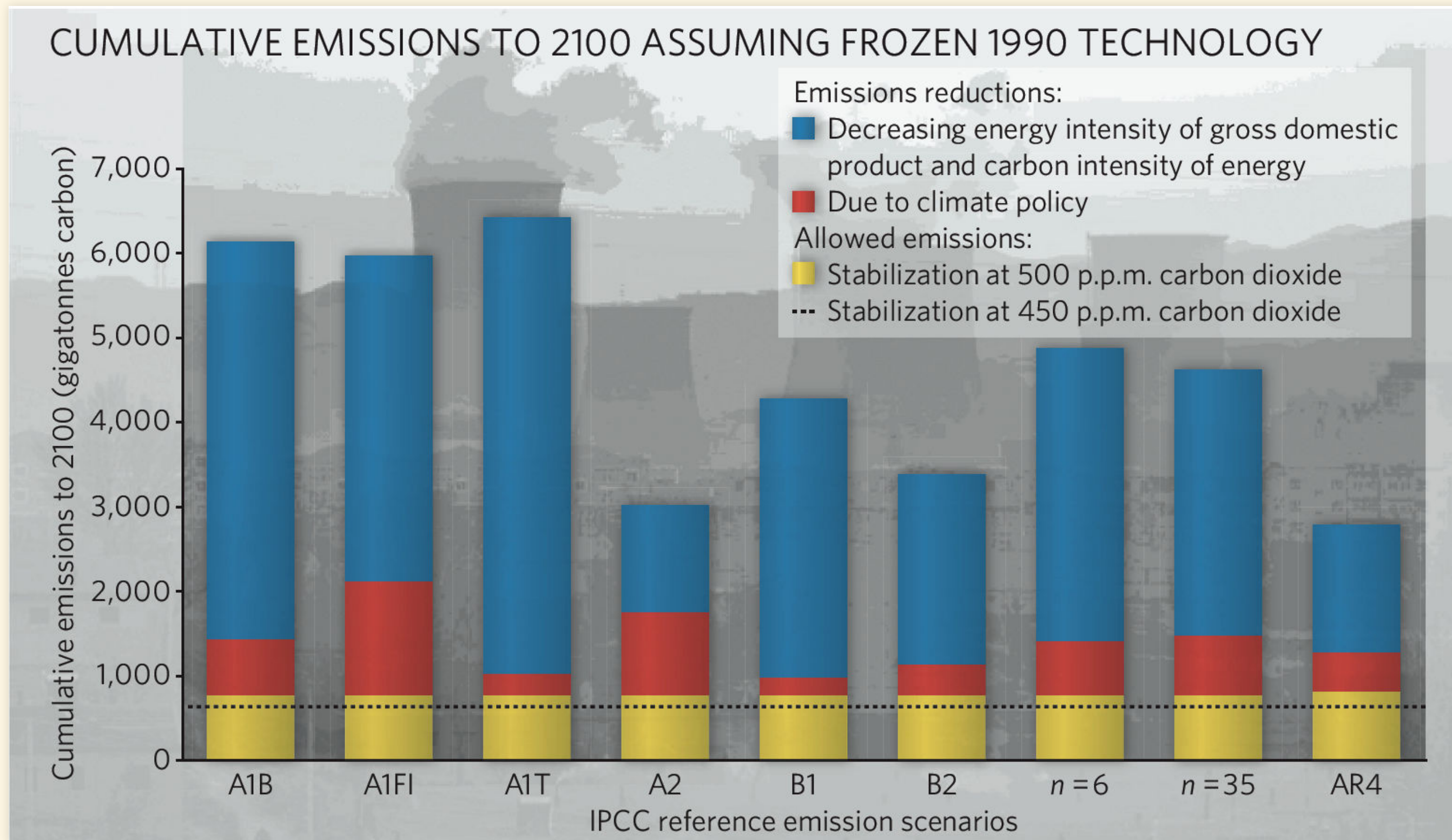 *...*
  a major goal of a heterogeneous society [is] to make it possible to obtain agreement where agreement is necessary, and to make it unnecessary to obtain agreement where agreement is impossible.

Myth 3:
# We have all
the technology we need.

Do we have the technology?

Do we have the technology?

CUMULATIVE EMISSIONS TO 2100 ASSUMING FROZEN 1990 TECHNOLOGY

Chart y-axis: Cumulative emissions to 2100 (gigatonnes carbon), values 0 to 7,000. X-axis: IPCC reference emission scenarios — A1B, A1FI, A1T, A2, B1, B2, n = 6, n = 35, AR4.

Legend:
Emissions reductions:
- Decreasing energy intensity of gross domestic product and carbon intensity of energy
- Due to climate policy

Allowed emissions:
- Stabilization at 500 p.p.m. carbon dioxide
- Stabilization at 450 p.p.m. carbon dioxide

- Blue = Assumed spontaneous emissions reduction
- Brown = Regulations
- Yellow = Allowed emissions to stabilize CO_2 at 550 ppm.

Optimism on energy efficiency

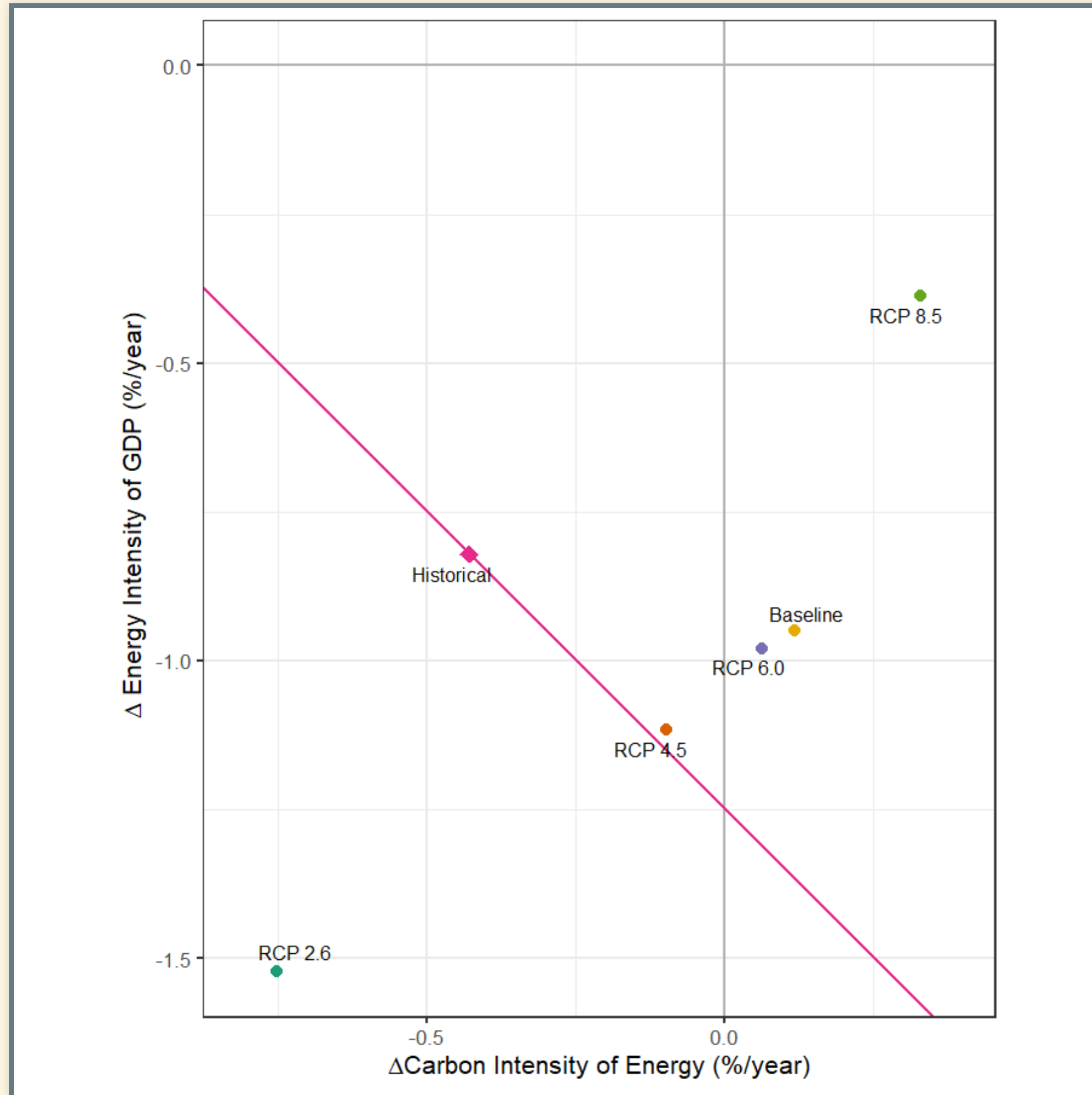ASSUMED DECARBONIZATION IN THE 35 IPCC SCENARIOS FOR 2000–2010
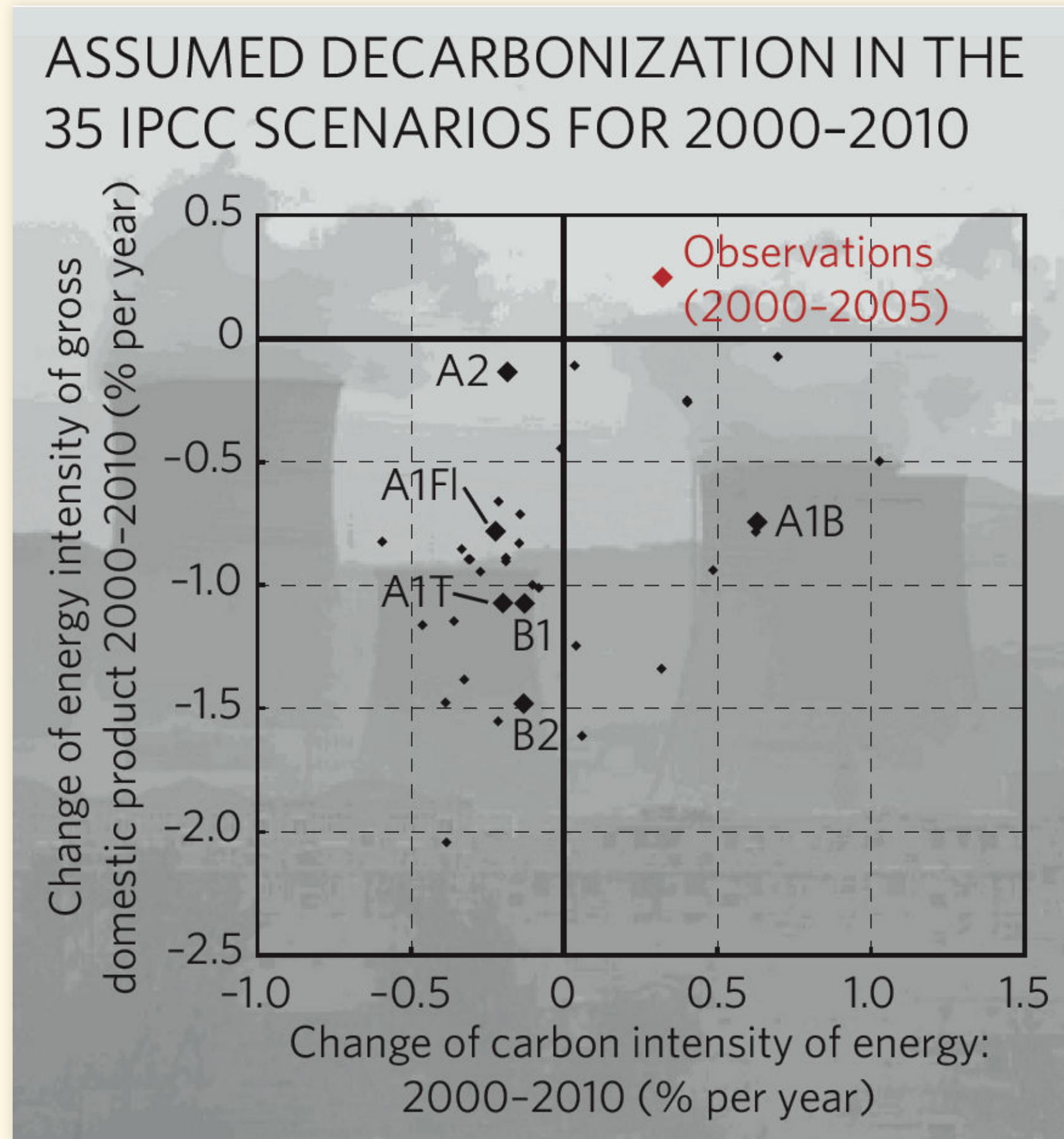
The View from 2018:

- Pielke's numbers focus on 2000–2005
  - The years when China's economy began really rapid growth
- After 2005, things changed:
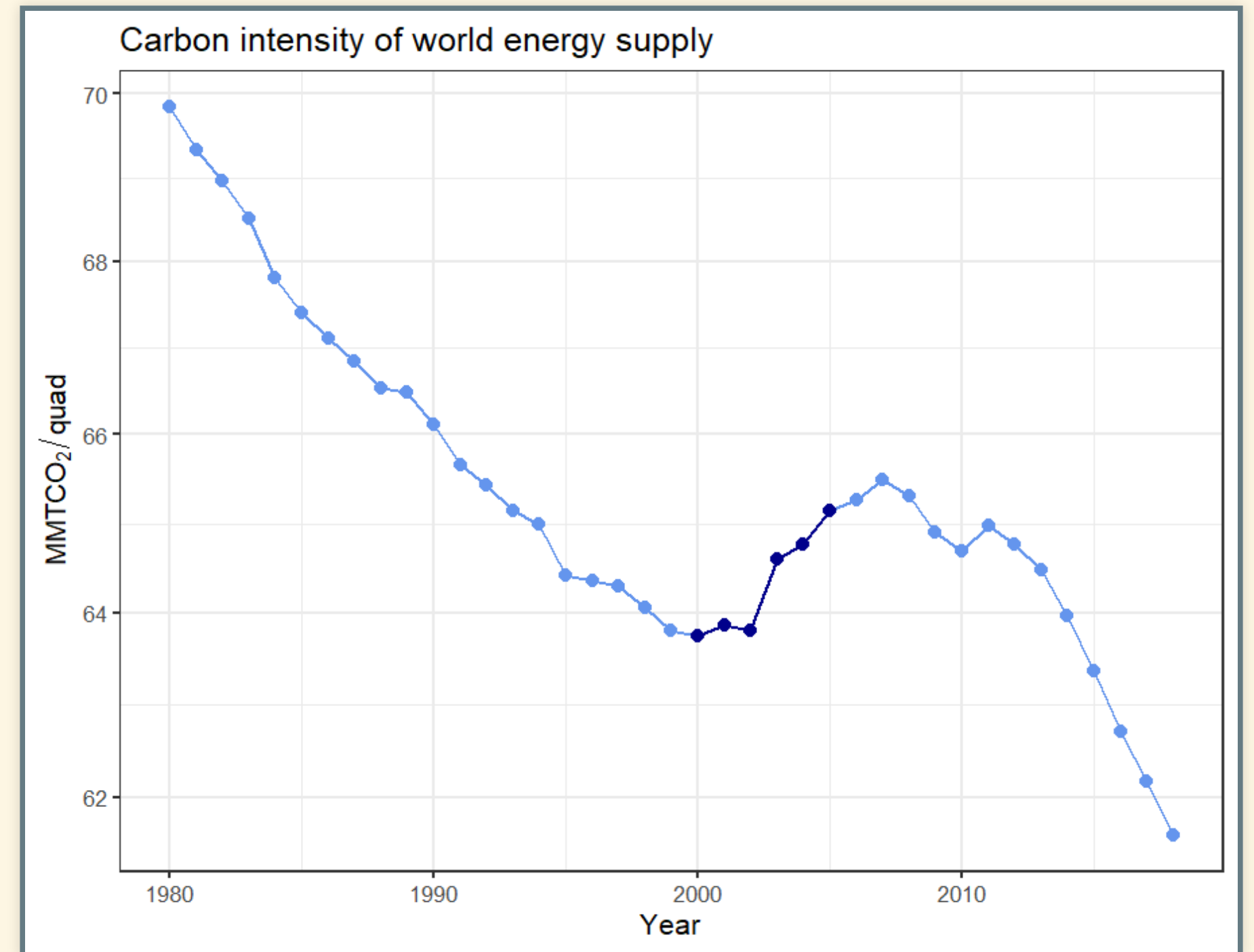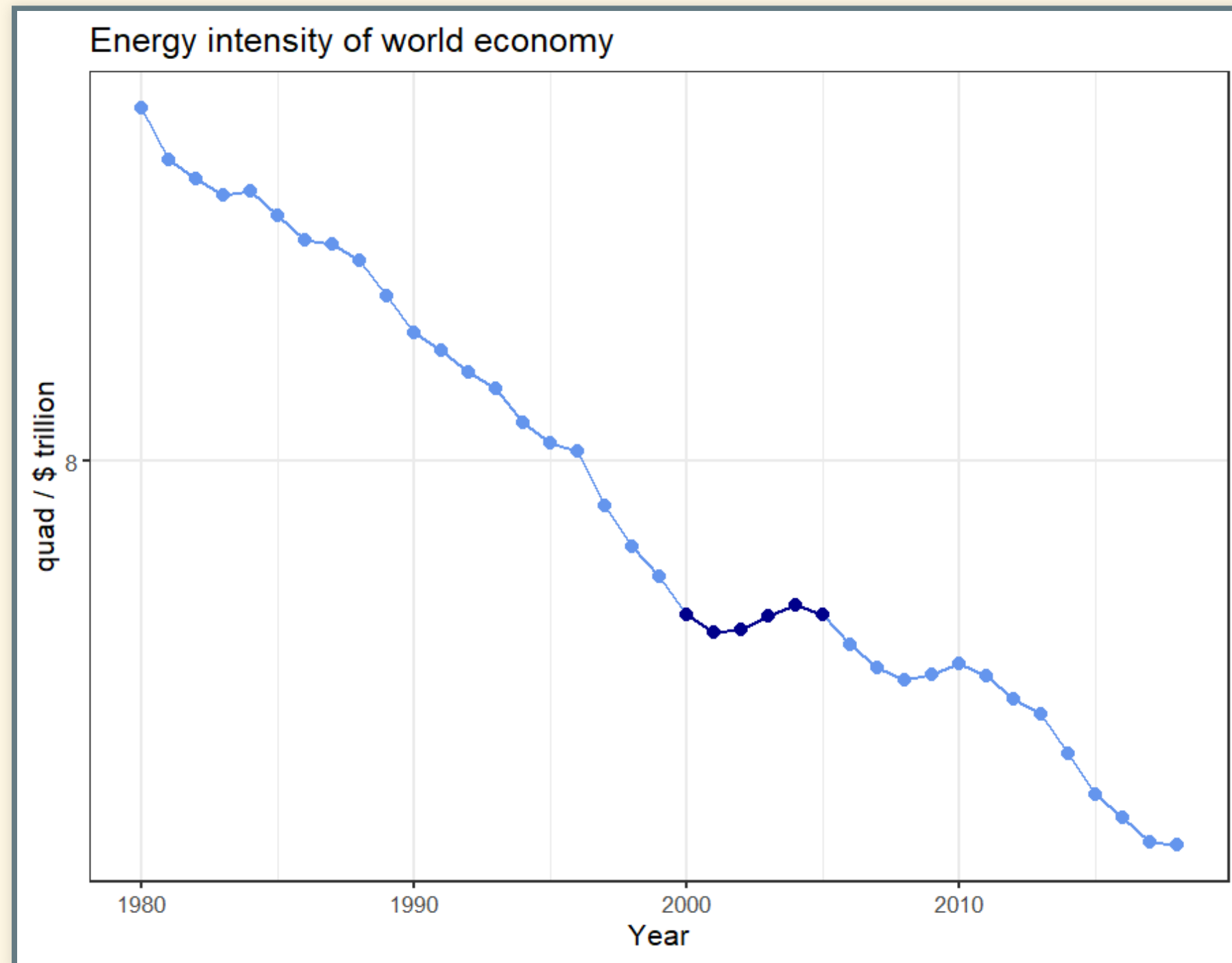
Current Emissions Pathways

- Comparing actual trends for 2005–2017 to trends for 2005–2020 in 5 emissions scenarios:
  - Points above & right of the magenta line have higher emission trends than historical
  - Points below & left of the magenta line have lower emission trends than historical
- The historical trend from 2005–2017 is doing better (lower emissions) than several scenarios including baseline (no policies) and RCP 6.0 (business as usual with current policies).

Do we have the technology?